

ABSTRACT OF THE DISCLOSURE

5 The present invention provides an improved aqueous solution for suspending and storing red blood cells. The solution includes sodium citrate, a combination of sodium biphosphate and sodium phosphate dibasic, adenine, and mannitol. The solution is formulated at a low osmolarity and has a physiological pH of approximately 7.4. The solution simultaneously maintains stored red cells ATP and 2,3-BPG.